

REMARKS

Reconsideration and allowance of the subject patent application are respectfully requested.

The specification has been amended to correct minor informalities. Entry of these amendments to the specification is respectfully requested.

Further to the election filed on October 24, 2005, claims 9-13 have been canceled without prejudice or disclaimer. Applicant reserves the right to file a divisional application directed to the non-elected claims.

The title of the application has been amended and a replacement Abstract is provided.

Claims 3, 7, 16 and 20 were objected to on the basis of informalities noted on page 2 of the office action. Claims 3, 7, 16 and 20 have been amended along the lines kindly suggested by the Examiner and withdrawal of the objection to these claims is respectfully requested.

Claims 1, 2, 5, 6, 8, 14, 15 and 17 were rejected under 35 U.S.C. Section 102(e) as allegedly being anticipated by Choo et al. (U.S. Patent No. 6,617,584). While not acquiescing in this rejection, claims 1 and 2 have been amended. The discussion below makes reference to the amended claims.

Claim 1 is directed to a photoelectric conversion device and, among other things, calls for a first insulating layer to have an opening portion extending to a connection electrode, for a conductive layer to be formed on the first insulating layer, for the conductive layer to be connected via the opening portion to the connection electrode, and for the connection electrode to be provided in a periphery of an active area. This location of the connection electrode is described by way of example without limitation on page 29, lines 13-17 of the subject patent application.

Choo et al. does not disclose, for example, a connection electrode that is formed in a periphery of an active area. In particular, it is clear from at least Figures 6 and 7 of Choo et al. that electrode 90 (which is alleged in the office action to correspond to the claimed connection

electrode) and the corresponding opening 78a are formed for each pixel throughout an active area, not in a periphery of an active area as claimed in claim 1. Consequently, Applicant respectfully submits that Choo et al. does not anticipate claim 1.

Claim 2 is directed to a photoelectric conversion device and, among other things, calls for a conductive layer to be formed so as to be connected to a connection electrode via an exposing portion provided on at least part of an end face of an outer boundary of a first insulating layer in order to expose at least part of the connection electrode.

The office action contends that element 78a of Choo et al. corresponds to the claimed exposing portion. Element 78a of Choo et al. is a contact hole and this contact hole is not provided at an end face of an insulating layer, as is clearly evident from Figures 6 and 7 of Choo et al., for example. In particular, the insulating layer in which contact hole 78a is formed extends further than hole 78a on every side, so the edges of hole 78a are not end faces of the insulating layer.

To even more clearly describe this feature, claim 2 specifically calls for the exposing portion to be provided on at least part of an end face of an outer boundary of the first insulating layer. Contact hole 78a of Choo et al. is clearly not arranged as claimed with respect to an outer boundary of an insulating layer. Consequently, Applicant respectfully submits that Choo et al. does not anticipate claim 2.

Claims 5, 6 and 8 depend from claim 1 and claims 14, 15 and 17 depend from claim 2. Applicant believes these claims are allowable because of these dependencies and because of the additional patentable features contained therein.

Claims 3, 4, 18 and 21 were rejected under 35 U.S.C. Section 102(e) as allegedly being anticipated by Ikeda et al. (U.S. Patent No. 6,323,490). While not acquiescing in this rejection, claim 3 has been amended. The discussion below makes reference to amended claim 3.

In connection with claim 3, the office action alleges with reference to Figure 69 of Ikeda et al. that passivation layer 4310 and organic insulating film 4314 correspond to the claimed first insulating layer; that a-Si layer 4304, gate electrode 4309, stopper layer 4312, and source/drain

layer 4316 correspond to the claimed photoconversion element; and capacitor electrode 4305, insulating film 4307 and source electrode 4315 correspond to the claimed pixel capacitor section. Pixel electrode 4311 is alleged to correspond to the claimed conductive layer and the thickness of the insulating layer 4310/4314 is alleged to be thinner in an area positioned on or above the pixel capacitor section than in other areas.

With respect to the thickness of the insulating layer, Applicant submits that the capacitor section in Figure 69 of Ikeda et al. is formed by electrode 4305 and the portion of the source electrode 4315 spaced apart therefrom by insulating layer 4307. Insulating layers 4310 and 4314 are not thinner above this capacitor section as compared to other areas. Claim 3 particularly specifies that the thickness of the first insulating layer is thinner in an area positioned above the pixel capacitor section, in which capacitor electrodes overlap, than in another area. No such arrangement is disclosed by Ikeda et al. Consequently, Applicant respectfully submits that Ikeda et al. does not anticipate claim 3.

Claims 4, 18 and 21 depend from claim 3. Applicant believes these claims are allowable because of these dependencies and because of the additional patentable features contained therein.

Claims 7, 16 and 20 were rejected under 35 U.S.C. Section 103(a) as allegedly being "obvious" over Choo et al. and Ikeda et al., further in view of Hamamoto et al. (U.S. Patent 6,800,836). Hamamoto is applied in connection with claims 7, 16 and 20 for its alleged disclosure of a conversion layer that converts non-visible light into light.

Both Choo et al. and Ikeda et al. are directed to X-ray detectors (see, e.g., Choo et al., Abstract; Ikeda et al., Abstract). One skilled in the art would assume that the devices of Choo et al. and Ikeda et al. are suitable for detecting X-rays without modification and so would not be motivated to further modify them to detect X-rays. Because the devices of Choo et al. and Ikeda et al. are designed to receive X-ray radiation and not visible light, converting the X-ray radiation into visible light would likely prevent the proper functioning of Choo et al. and Ikeda et al.

Moreover, Hamamoto does not remedy the deficiencies of the primary references Choo and Ikeda with respect to the independent claims. As such, even were the conversion layer of

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Hamamoto added to the devices of Choo and Ikeda, the subject matter of claims 7, 16 and 20 (which claims depend from claims 1, 2 and 3, respectively) would not have resulted.

Claim 19 was rejected under 35 U.S.C. Section 103(a) as allegedly being "obvious" over Ikeda et al. in view of Choo et al. In particular, Choo et al. is combined with Ikeda et al. to allegedly provide the second insulating layer of claim 19. However, even assuming for the sake of argument that Ikeda et al. were to be provided with a second insulating layer, this would not remedy the deficiencies of Ikeda et al. with respect to claim 3, from which claim 19 depends.

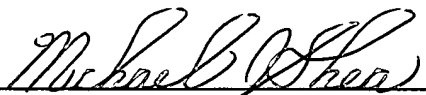
New claims 22-33 have been added. The subject matter of these new claims is believed to be fully supported by the original disclosure. These claims recite, among other things, arrangements of an array of pixels, a connection electrode, a first insulating layer, a conductive layer and an opening or exposing portion that Applicant respectfully submits is not disclosed by the applied documents.

The pending claims are believed to be allowable and favorable office action is respectfully requested.

Respectfully submitted,

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